

The Virginia Drinking Water Program: An Overview

“The purity of the public water supply bears a most intimate relation to the health of the community ... [and] ... its vital importance to the people of Virginia cannot be too vigorously impressed.” So stated Commissioner of Health, Dr. Ennion G. Williams, M.D., in his 1912 Annual Report to the Governor of Virginia. This statement from the first part of the last century remains valid into this century.

In fact, Virginian’s have always taken protection of our drinking water seriously. As far back as May 24, 1610, Sir Thomas Dale, Deputy Governor for the Colony of Virginia, proclaimed that “No man, woman ... dare to wash any unclean linnen, ... or throw out the water or suds of fowle cloathes ... within the Pallizadoes, or within forty foote of the same, ... nor rench and make clean any vessel within 20 foote of the olde well ... nor shall any aforesaid, within lesse than a quarter of one mile from the Pallizadoes, dare to do the necessities of nature, since by these unmanly, slothful, and loathsome immodesties, the whole fort may bee cloaked, and poisoned ...”

From 1912 through 1974, Virginia has continuously maintained a proactive state public drinking water program. In 1974 Congress passed, and President Ford signed, the Safe Drinking Water Act (SDWA). This marked the entrance of the federal government into the protection of public health, through the establishment of enforceable national drinking water standards.

The Environmental Protection Agency (EPA) established the Public Water System Supervision (PWSS) Program under the authority of the SDWA. Under the SDWA and its subsequent amendments, EPA sets national limits on contaminant levels in drinking water to ensure that the water is safe for human consumption. These limits are known as Maximum Contaminant Levels (MCLs) and the Maximum Residual Disinfectant Levels (MRDLs). For some regulations, EPA establishes treatment techniques in lieu of an MCL to control unacceptable levels of contaminants in drinking water. The EPA also regulates how often public water systems (PWSs) monitor their drinking water for contaminants and report the monitoring results to the Virginia Department of Health (VDH). Generally, the larger the population served by a water system, the more frequent the monitoring and reporting (M/R) requirements. In addition, EPA requires PWSs to monitor for unregulated contaminants to provide data for future regulatory development. Finally, EPA requires PWSs to notify the public when they have violated these regulations. The 1996 Amendments to the SDWA require public notification to include a clear and understandable explanation of the violation, its potential adverse health effects, steps that the PWS is undertaking to correct the violation and the possibility of alternative water supplies during the violation.

The SDWA applies to all 50 States, the District of Columbia, Indian Lands, Puerto Rico, The Virgin Islands, American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands.

The SDWA allows States and Territories to seek EPA approval to administer their own

PWSS Programs. The authority to run a PWSS Program is called primacy. To receive primacy, States must meet certain requirements laid out in the SDWA and the regulations, including the adoption of drinking water regulations that are at least as stringent as the Federal regulations and a demonstration that they can enforce the program requirements. Of the 56 States and Territories, all but Wyoming and the District of Columbia have primacy. The EPA Regional Offices administer the PWSS Programs within these two jurisdictions. Virginia has continuously maintained primacy for the PWSS Program since 1977.

Annual State PWS Report

Virginia submits data to the Safe Drinking Water Information System (SDWIS/FED) on a quarterly basis. This automated database is maintained by the EPA. Data submitted include, but are not limited to, PWS inventory information, the incidence of Maximum Contaminant Level, Maximum Residual Disinfectant Level, Major Monitoring, and Treatment Technique violations, and the enforcement actions taken against violators. The annual compliance report that Virginia is required to submit to EPA will provide a total annual representation of the numbers of violations for each of the categories listed in section 1414(c)(3) of the 1996 Amendments to the SDWA reauthorization. These categories are: MCLs, MRDLs, treatment techniques, variances and exemptions, significant monitoring violations and significant consumer notification violations. The EPA Regional Office in Philadelphia reports any Federal drinking water enforcement actions taken in Virginia. EPA stores this data in the SDWIS automated database. This report is based on data retrieved from the SDWIS/FED.

Public Water System

A PWS (called a waterworks in Virginia) is defined as a system that provides water via piping for human consumption to at least 15 service connections or serves an average of at least 25 people for at least 60 days each year. There are three types of waterworks. Waterworks can be community (such as towns), nontransient noncommunity (such as schools and factories), or transient noncommunity (such as rest stops, restaurants, and parks) which have their own source of water supply. This report covers all three types unless specified otherwise.

Maximum Contaminant Level

Under the SDWA, the EPA sets national standards on contaminant levels in drinking water to ensure that the water is safe for human consumption. These standards are known as MCLs.

Maximum Residual Disinfectant Level

The EPA sets national limits on residual disinfectant levels in drinking water to reduce the risk of exposure to disinfectant byproducts formed, when waterworks add chemical disinfectant for either primary or residual treatment. These limits are known as Maximum Residual Disinfectant Levels (MRDLs).

Treatment Techniques

For some regulations, EPA establishes treatment techniques (TTs) in lieu of an MCL to control unacceptable levels of certain contaminants. For example, treatment techniques have been established for viruses, some bacteria, and turbidity.

Variance and Exemptions

Variances and exemptions to specific requirements under the 1996 Amendments to the SDWA may be granted under certain circumstances. If, due to the characteristics of the raw water sources reasonably available, a waterworks cannot meet the MCL, Virginia could grant the waterworks a variance from the applicable drinking water regulation on the condition that the waterworks install the best available technology, TT, or other means which are available (taking costs into account). The VDH must find that the variance will not result in an unreasonable risk to health, and shall prescribe, at the time the variance is granted, a schedule (including increments of progress) in accordance with which the waterworks must come into compliance. Small waterworks (serving 3300 people or fewer) may be granted variances if they cannot afford to comply with certain MCLs by means of treatment, alternative source of water, or restructuring or consolidation. Small waterworks must, within three years, install and operate EPA-approved small system variance technology. The variance must ensure adequate protection of human health, and the VDH shall review the variance not more than every five years to determine if the waterworks remains eligible for the variance.

Virginia may, by exemption, relieve a waterworks of its obligation to comply with an MCL, TT, or both if the waterworks' noncompliance results from certain compelling factors. The VDH must find that the exemption will not result in an unreasonable risk to public health. The VDH will require the waterworks to comply with the MCL or treatment technique as expeditiously as practical, but not later than three years after the otherwise applicable compliance date.

Monitoring

A waterworks is required to monitor and verify that the levels of contaminants present in the drinking water do not exceed the MCL. If a waterworks fails to have its water tested

as required, then a monitoring violation occurs. A monitoring violation includes failure to report test results correctly to the VDH.

Significant Monitoring Violations

For this report, significant monitoring violations are generally defined as any major monitoring violation that has occurred during the calendar year of the report. A major monitoring violation, with rare exceptions, occurs when no samples were taken or no results are reported to the VDH during the compliance period.

Consumer Notification

Every community waterworks is required to deliver to its customers an annual water quality report. This report is to include some educational material, and will provide information on source water, levels of any detected contaminants, and compliance with drinking water regulations.

Significant Consumer Notification Violations

For this report, a significant public notification violation occurred if a community waterworks completely failed to provide its customers the required annual water quality report.

Reviewing a Copy of the 2007 Annual Compliance Report

As required by the SDWA, Virginia has made the 2007 Annual Compliance Report available to the public. Interested individuals can review the 2007 Annual Compliance Report for Virginia by accessing the Office of Drinking Water's website at:

<http://www.vdh.virginia.gov/drinkingwater/compliance/annualReport.htm>